

Eastern Telegraph Company, Limited,
AND
Eastern & South African Telegraph Co., Limited,

Tracts A. 399.

(1)

TROPICAL DISEASE.

A Memorandum

BY

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M.D., F.R.S.



Issued to the Company's Stations and Employés,

By order of the Board,

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1. The first part of the document is a list of names and their corresponding addresses. The names are: John A. Smith, John B. Smith, John C. Smith, John D. Smith, John E. Smith, John F. Smith, John G. Smith, John H. Smith, John I. Smith, John J. Smith, John K. Smith, John L. Smith, John M. Smith, John N. Smith, John O. Smith, John P. Smith, John Q. Smith, John R. Smith, John S. Smith, John T. Smith, John U. Smith, John V. Smith, John W. Smith, John X. Smith, John Y. Smith, John Z. Smith. The addresses are: 123 Main St., 456 Main St., 789 Main St., 101 Main St., 202 Main St., 303 Main St., 404 Main St., 505 Main St., 606 Main St., 707 Main St., 808 Main St., 909 Main St., 1010 Main St., 1111 Main St., 1212 Main St., 1313 Main St., 1414 Main St., 1515 Main St., 1616 Main St., 1717 Main St., 1818 Main St., 1919 Main St., 2020 Main St., 2121 Main St., 2222 Main St., 2323 Main St., 2424 Main St., 2525 Main St., 2626 Main St., 2727 Main St., 2828 Main St., 2929 Main St., 3030 Main St., 3131 Main St., 3232 Main St., 3333 Main St., 3434 Main St., 3535 Main St., 3636 Main St., 3737 Main St., 3838 Main St., 3939 Main St., 4040 Main St., 4141 Main St., 4242 Main St., 4343 Main St., 4444 Main St., 4545 Main St., 4646 Main St., 4747 Main St., 4848 Main St., 4949 Main St., 5050 Main St., 5151 Main St., 5252 Main St., 5353 Main St., 5454 Main St., 5555 Main St., 5656 Main St., 5757 Main St., 5858 Main St., 5959 Main St., 6060 Main St., 6161 Main St., 6262 Main St., 6363 Main St., 6464 Main St., 6565 Main St., 6666 Main St., 6767 Main St., 6868 Main St., 6969 Main St., 7070 Main St., 7171 Main St., 7272 Main St., 7373 Main St., 7474 Main St., 7575 Main St., 7676 Main St., 7777 Main St., 7878 Main St., 7979 Main St., 8080 Main St., 8181 Main St., 8282 Main St., 8383 Main St., 8484 Main St., 8585 Main St., 8686 Main St., 8787 Main St., 8888 Main St., 8989 Main St., 9090 Main St., 9191 Main St., 9292 Main St., 9393 Main St., 9494 Main St., 9595 Main St., 9696 Main St., 9797 Main St., 9898 Main St., 9999 Main St.

[*Medical Opinion.*]

GENTLEMEN,

TROPICAL DISEASE.

THERE is a malady of rather frequent occurrence in hot climates which, though sufficiently serious when once fairly established, may be easily avoided.

This disease is of a parasitic nature, and by professional men it is variously called Hæmaturia, Endemic Hæmaturia, Egyptian Chlorosis, Distoma Disease, Hæmatozoal Affection, and so forth. It causes discoloration of the urine and is due to the presence of a small fluke in the blood. The name of the parasite is *Bilharzia Hæmatobia*.

By whatever name called, the disease thus produced not only affects natives and colonists long resident in the affected districts, but it is liable to show itself in any European who visits the country for a short period, and who, not being warned of the danger, takes no steps to avoid infection. Not the slightest alarm need be felt at this statement, since a little correct knowledge of the natural history of the parasite, coupled with the observance of a few simple rules, is sufficient to enable any intelligent person to avoid contracting the disease.

It is now very generally known that cattle and sheep infect themselves with the common liver fluke

(*Fasciola hepatica*) by swallowing the larvæ. These are called tailed flukes, or *Cercariæ*, and they reside in the bodies of small fresh-water snails. The *Cercariæ* also swim freely in the water. It so happens that cattle and sheep also infect themselves with a species of *Bilharzia* similar to that which attacks the human body. The so-called 'red-water' in cattle is supposed to be due to this fluke. It has become a matter of certainty that both man and animals obtain the *Bilharzia* in the same way. The larvæ of this little parasite, like those of the common fluke, reside in small fresh water mollusks, and they also, at one or more periods of their lifetime, swim about in the water.

The *Bilharzia* disease must have a wide geographical range, since we have already become acquainted with Europeans who have contracted it either in Egypt, in Natal, or at the Cape. It is known also to exist on the Arabian border of the Red Sea.

To avoid infection strict observance of the following rules is recommended :—

1. To select for drinking purposes, whenever procurable, either deep well water, or water from a spring collected at or near its source.

2. To avoid the use of stagnant water of any kind, especially that procured from tanks or shallow pools.

3. If the only water available for drinking purposes has been obtained from a doubtful source, it must either be thoroughly filtered or

boiled : merely straining through muslin or other of the coarser kinds of filter is useless. On excursions or shooting expeditions a pocket filter must be carried.

4. Avoid partaking of all salads made with vegetables grown either in market gardens or in open situations frequented by natives of uncleanly habits. Lettuces, water-cresses, and other uncooked vegetables, even when they are known to have been cultivated in favourable situations, require to be carefully washed with clean water before use. Only spring water, well water, filtered water, boiled water, and distilled water can be pronounced as absolutely safe ; springs near human habitations are liable to become contaminated.

In the opinion of the undersigned the observance of these rules is sufficient to ensure protection ; but since others (whose opinions are also entitled to consideration) take a different view of the mode of infection, it is desirable to state the grounds on which an additional precaution has been recommended.

It is supposed by some writers that the young *Bilharziæ* gain access to their victims by perforating the skin. Consequently they would forbid bathing in rivers, canals, and open fresh waters of any kind. Sea bathing on the other hand is strongly and very properly encouraged.

There is some ground for the views thus expressed, inasmuch as the larvæ of the common fluke have been

known to penetrate the skin and to develop in such situations. These instances, however, are rare, and they merely afford examples of 'straying' from the usual path. The first step of infection by *Bilharzia* originates with the contamination of water. Eggs of the parasite are passed with the urine of all infected persons. The habits of the natives in Egypt are eminently favourable to the contamination of all open waters. The eggs, soon after they are discharged, hatch by bursting. The embryos thus liberated, swim rapidly by means of cilia. The ciliated animalcules subsequently gain access to the bodies of snail mollusks, and within them they are transformed into the dangerous larvæ (*Cercariæ*). It is the swallowing of these larvæ, either whilst they are still within the water-snails, or after their escape from the snails into the water, which constitutes the ordinary, if not the exclusive, mode of infection.

As young people are apt to be unduly apprehensive, it may be as well to state that the existence of the *Bilharzia* disease need not be suspected if the urine has always remained clear and of the natural colour.

T. SPENCER COBBOLD, M.D., F.R.S.

74, PORTSDOWN ROAD, LONDON,

March 20th, 1882.

to the Directors of the
*Eastern and Eastern and South African Telegraph
 Companies, Limited.*



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